



**CONSUMERS' NEGATIVE EMOTIONS IN OVERPACKAGING: THE  
ROLE OF RELIGIOSITY, PERSONAL NORMS, AND MATERIALISM  
(STUDY AMONG TAIPEI RESIDENTS)**

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# TESIS

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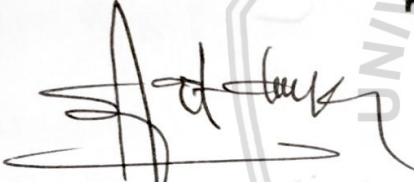
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Sincerely,  
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## ABSTRAK

Dari semua topik terkait dengan perlindungan lingkungan, penanganan limbah muncul sebagai masalah besar bagi lingkungan. *Overpackaging* menjadi salah satu penyebab meningkatnya jumlah limbah karena adanya kemasan berlebihan yang ditimbulkan. Penelitian ini menerapkan *Cognitive Appraisal Theory* untuk mengetahui bagaimana *negative emotion (guilt, regret, and shame)* muncul setelah konsumen mengevaluasi situasi *overpackaging*. Proses evaluasi ini akan dipegaruhi oleh *religious belief* (daily spiritual experience, private religious practice, and religion/spiritual coping), *materialism*, dan *personal norm*. Data dikumpulkan melalui sebuah survey pada 230 penduduk Taipei. Penelitian ini menggunakan *quota sampling* dengan jenis kelamin, usia, dan pendapatan sebagai kriteria penentuan kuota. Hasil penelitian ini menunjukkan bahwa *religious belief* berpengaruh signifikan terhadap *personal norms*, *personal norms* kemudian mempengaruhi munculnya *negative emotion*. Selain itu, penelitian ini juga menunjukkan bahwa *materialism* secara negatif memoderasi hubungan antara *daily spiritual experience* dan *religious/spiritual coping* dan *personal norms*.

**Keywords:** *overpackaging, cognitive appraisal theory, religiosity, daily spiritual experience, private religious practice, religion/spiritual coping, personal norms, negative emotion, guilt, regret, shame.*

## ABSTRACT

Among all the topics related to environmental conservation, waste management emerges as a major issue for our environment. Overpackaging is particularly pointed as the cause of this increasing waste because it implies more packaging than necessary. This research applied Cognitive Appraisal Theory to investigate how negative emotions (guilt, regret, and shame) elicits as the result of consumers evaluation in overpackaging situation. This evaluation process is influenced by religious belief (daily spiritual experience, private religious practice, and religion/spiritual coping) as the personal factor or antecedents, materialism as the moderator, and personal norms as the mediator. Data was collected among Taipei residents (n=230). This research employs a quota sampling procedure with gender, age, and income as the quota criteria. The result revealed that all the religiosity constructs (daily spiritual experience, private religious practice, and religious/spiritual coping), has significant positive impact on personal norms in supporting overpackaging decrease. Personal norms further will influence the elicitation of guilt, regret, and shame as emotional outcome of choosing overpackaged product. This result also showed that materialism is negatively moderating the relationship between private religious practice and personal norms in reducing overpackaging, and is not moderating the relationship between daily spiritual experience, religious/spiritual coping and personal norm. Theoretical and managerial implications are discussed while limitation and suggestions for future research are outlined as well.

**Keywords:** *overpackaging, cognitive appraisal theory, religiosity, daily spiritual experience, private religious practice, religion/spiritual coping, personal norms, negative emotion, guilt, regret, shame.*



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Di dalam tulisan ini, disajikan pokok-pokok bahasan yang meliputi: Pendahuluan (*Introduction*), Kajian Pustaka (*Literature Review*), Metodologi Penelitian (*Methodology*), Hasil Penelitian (*Results*), dan Penutupan (*Discussion*).

Sangat disadari bahwa dengan kekurangan dan keterbatasan yang dimiliki penulis, walaupun telah dikerahkan segala kemampuan untuk lebih teliti, tetapi masih dirasakan banyak kekurangtepatan, oleh karena itu penulis mengharapkan saran yang membangun agar tulisan ini bermanfaat bagi yang membutuhkan.

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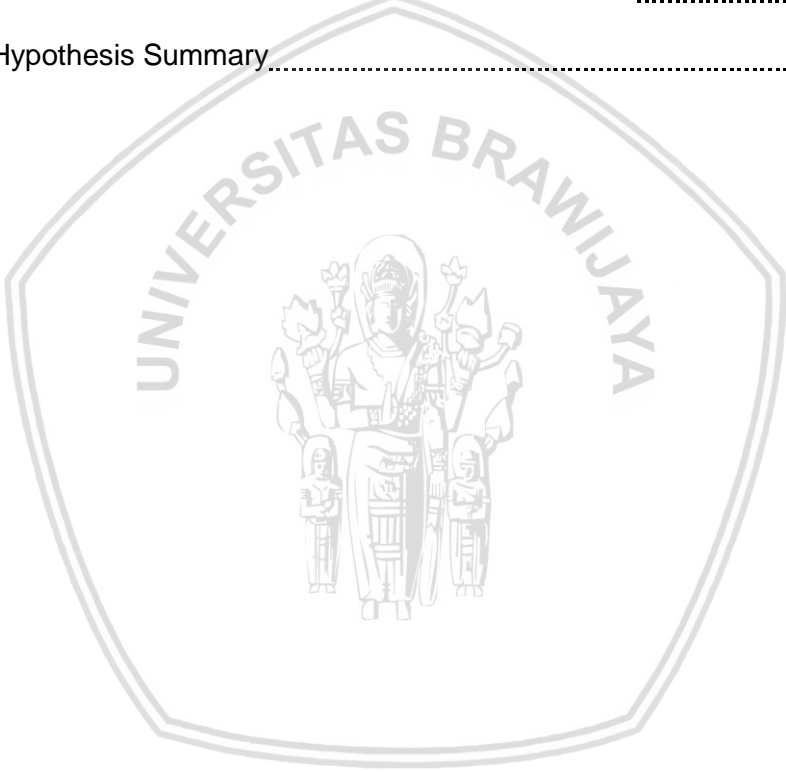
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## CHAPTER 1

### INTRODUCTION

#### 1.1. Research Background

Among all the topics related to environmental conservation, waste management has always been a major issue (Davies et al., 2002; McCarty and Shrum, 1994; Rothenberg, 2007; Schreck and Wagner, 2017). Packaging is the reason for the increasing amount of waste (Chen et al., 2017), while over-packaging, or excessive packaging, is particularly pointed as the cause of increasing waste since it implies more packaging materials than necessary (Elgaaied-Gambier, 2016). Not only waste production and subsequent environmental effect, excessive packaging also requires far higher consumption of energy and water (5, 6, and 4 times, respectively) than ordinary packaging (Wang et al. 2013). Overpackaging differs from green packaging, eco-friendly packaging and sustainable packaging, which, in general, refer to the appropriate packaging that uses eco-friendly wrapping materials and will lead to improved sustainability (Svanes et al., 2010; Zhang and Zhao, 2012). Although overpackaging tends to be associated with better perceived quality or premium products (Elgaaied-Gambier, 2016), consumers also want to be sustainable (Park and Ha, 2012) and the salience of non-overpackaging has awaken consumers in their eco-consumption (Elgaaied-Gambier, 2016). This might encourage firms to provide eco-products without unnecessary waste from the effect of over-packaging (Chen et al., 2017; Monnot et al., 2014).

Taiwan is one of the country having a awareness about sustainable living. In the support to reduce overpackaging, they published a regulation about overpackaging for the residents that showed in Huan-Shu-Fei No. 0940050818E. This regulation is not



only for business purposes but also for all activity which have the potential of overpackaging such as gift wrapping. As the capital city of Taiwan, Taipei government always work hard to build sustainable urban living for their resident that implies the existing of high overpackaging knowledge among their resident ([futurecities.skift.com](http://futurecities.skift.com))

In spite of the overpackaging significance in ecological management, a review of the literature indicates that with a few exceptions (e.g., Elgaaied-Gambier, 2016; Monnot et al., 2014; Wang et al., 2013), the prior literature mainly devotes efforts in green packaging, environmental friendly packaging, and sustainable packaging (e.g., Magnier and Crie, 2015; Prakash and Pathak, 2017; Seo et al., 2016). The existing over-packaging study of Wang et al. (2013) compares resource use between over-packaging and ordinary packaging; Monnot et al. (2014) explores the association between overpackaging elimination and a firm's image, perceived quality, its product purchase intention etc.; Elgaaied-Gambier (2016) investigates brand image and the selection of over-packaged products. These extant studies pay attention to resource consumption or perceptions and behavior responses pertaining to overpackaging.

Modes of emotion have been frequently observed significantly in determining different types of consumer sustainable behavior (e.g., Carrus et al., 2008; Meneses, 2010; Theotokis and Manganari, 2015), while a recent research by Koenig-Lewis et al. (2014) confirms that both positive and negative emotions play a critical role in predicting pro-environmental purchase behavior in ecologically packaged products. According to Wang and Wu's (2016) study, negative emotion is more highly correlated with sustainable consumption than positive emotion. Also, Carrus et al. (2008) observes that negative emotion drives to the desire of favorable behavior towards eco-products/services whereas positive emotion fails to. A number of these empirical evidences might infer the better effectiveness of negative emotion in driving the

resultant pro-environmental consumption such as non-over-packaged products. A call for exploring the driving forces of negative emotion, thereby manipulating subsequent over-packaged consumption behavior, has emerged. However, there is a paucity of research in the regard related to the determinants of negative emotion in overpackaging.

The Cognitive Appraisal theory (Lazarus and Launier, 1978) (CAT hereinafter) denotes that personal and situational factors are important determinants of an appraisal process which is the evaluation someone makes based on the situation they encounter. The process may make the same event to be stressful to one individual but not another (Lazarus and Folkman, 1984) and is strongly tied with the eliciting emotional response about the situation (Lazarus and Launier, 1978). CAT has been applied in various subjects and its applicability has been evidenced such as in understanding the occurrence of post-consumption emotions (Antonetti and Maklan, 2014; Nyer, 1997), the behavior motivation process at the post-consumption stage (Soscia, 2007), and the stress-coping strategy (Lazarus and Folkman, 1984). As such, the current research applies CAT to guide the development of the proposed “belief-norm-emotion” framework that elicits negative emotion as the result of consumer evaluation in the case of over-packaging. The driving forces in the framework are personal factors, in particular personal religious belief, through the mediation of personal norm and under the contingency of materialism value. Ways of thinking and perceptions play significant roles in affecting individuals’ evaluation (Lazarus and Folkman, 1984), and since being part of the cognitive schema and possibly used for life choices (Belanger et al., 2008), personal religious belief is thus deemed a critical precursor during their appraisal in the consumption of overpackaged goods.

Religious belief is the belief in God followed by a commitment to a believed set

of rules and principles of God (McDaniel and Burnett, 1990). In this research, we focus on three kinds of religious belief: daily spiritual experience, private religious practice, and religion/spiritual coping. According to Jackson & Bergeman (2011), these religious beliefs are the influencers of subjective well-being which may be comprised of positive and negative emotions (Diener, 1984), Norm refers to the personal norms of self-expectation of specific action in a particular situation which is experienced as a feeling of moral obligation (Schwartz, 1977). The studied elicited negative emotional responses include regret, guilt and shame which are important in reducing undesirable behavior (also see Agrawal and Duhacheck, 2010; Richard et al., 1997). Materialism describes the acquisition and ownership of material goods and thereby achieving major life goals or desired states (Richins and Dawson, 1992). Materialism may affect the way of an individual's appraisal process and is thus regarded as the contingent condition for applying the proposed belief-norm-emotion framework in a more detailed and insightful fashion.

By doing so, a sequential belief-norm-emotion framework is developed, which contributes to the applicability of the CAT theory in the ecological, and more specifically the overpackaging and sustainability matter. This research thus advances our knowledge of the negative emotion literature applied in this emerging, significant, but ignored subject. Also, this research adds values to the existing literature that religious belief serves as an important personal factor in the appraisal process of green sustainability consumption (Lazarus and Folkman, 1984). For practitioners, the research findings provide a set of empirically-tested guidance pertaining to negative emotions which are most likely to occur in the case of overpackaging impact on green environment. Materialism is highlighted as a situational value that affects the influences of various types of emotion on the subsequent variable of personal norm.



The rest of this research is organized as follows. Starts with literature review, a conceptualization for the study is developed through the exploration and definition of the constructs. Furthermore, the relationship between constructs is investigated and then research hypotheses are proposed. Secondly, the sample and measures employed in the study are described, and then the empirical research results are reported. In the last chapter, the results are discussed along with the theoretical and managerial implications of the findings. Finally, limitations of the study are identified and future research directions are suggested.

## **1.2. Research Questions**

Based on the research background, research questions of this research described as follows:

1. Do consumer daily spiritual experience has a direct positive effect on consumer personal norm of anti-overpackaged goods?
2. Do consumer private religious practice has a direct positive effect on consumer personal norm of anti-overpackaged goods?
3. Do consumer religious/spiritual coping has a direct positive effect on consumer personal norm of anti-overpackaged goods?
4. Do materialism moderate the relationship between consumer daily spiritual experience and personal norms of anti-overpackaged goods?
5. Do materialism moderate the relationship between consumer private religious practice and personal norms of anti-overpackaged goods?
6. Do materialism moderate the relationship between consumer religious/spiritual coping and personal norms of anti-overpackaged goods?
7. Do consumer personal norm of anti-overpackaged goods has a direct positive

effect on consumer guilt regarding the consumption of overpackaged goods?

8. Do consumer personal norm of anti-overpackaged goods has a direct positive effect on consumer regret regarding the consumption of overpackaged goods?
9. Do consumer personal norm of anti-overpackaged goods has a direct positive effect on consumer shame regarding the consumption of overpackaged goods?

### 1.3. Research Purposes

Based on the research background and questions, the purpose of this study are described as follows:

1. Examine and analyze the direct effect of consumer daily spiritual experience on consumer personal norm of anti-overpackaged goods?
2. Examine and analyze the direct effect of consumer private religious practice on consumer personal norm of anti-overpackaged goods?
3. Examine and analyze the direct effect of consumer religious/spiritual coping on consumer personal norm of anti-overpackaged goods?
4. Examine and analyze the moderating effect of materialism in the relationship between consumer daily spiritual experience and personal norms of anti-overpackaged goods?
5. Examine and analyze the moderating effect of materialism in the relationship between consumer private religious practice and personal norms of anti-overpackaged goods?
6. Examine and analyze the moderating effect of materialism in the relationship between consumer religious/spiritual coping and personal norms of anti-overpackaged goods?
7. Examine and analyze the direct effect of consumer personal norm of anti-

overpackaged goods on consumer guilt regarding the consumption of overpackaged goods?

8. Examine and analyze the direct effect of consumer personal norm of anti-overpackaged goods on consumer regret regarding the consumption of overpackaged goods?
9. Examine and analyze the direct effect of consumer personal norm of anti-overpackaged goods on consumer shame regarding the consumption of overpackaged goods?

#### **1.4. Reserch Benefits**

Theoretical and practical benefits expected from this research are:

##### **1.4.1.Theoretical Benefits**

The theoretical benefits expected from this research are described as follows:

1. By developing a sequential belief-norm-emotion framework, this research contributes to the applicability of the Cognitive Appraisal Theory in the ecological, and more specifically the overpackaging and sustainability matter.
2. Advance our knowledge of the negative emotion literature applied in green marketing specifically the overpackaging as an emerging, significant, but ignored subject.
3. Add values to the existing literature that religious belief serves as an important personal factor in the appraisal process of green sustainability consumption (Lazarus and Folkman, 1984).

##### **1.4.2.Practical Benefits**

The practical benefits expected from this research are described as follows:

1. Provide a set of empirically-tested guidance pertaining to negative emotions



which are most likely to occur in the case of overpackaging impact on green environment that useful for a sustainable company to perform better sustainable business practice.

2. Provide suggestions to a sustainable company about the importance of consumer materialism values as a situational value that affects the influences of various types of emotion on the subsequent variable of personal norm.



## CHAPTER 2

### LITERATURE REVIEW

#### 2.1. Green Marketing and Overpackaging

Peattie and Charter (2003) defined green marketing as the holistic management process responsible for identifying, anticipating and satisfying customer needs and society in a profitable and sustainable perspective. Soonthonsmai (2007) adds to the definition that firms which are concerned about the environment should develop a products/services with the aim of achieving consumers' and society's satisfaction. The current literature explains that green products are friendly for the environment because they integrated with recycling strategies to implement reusable, recyclable or naturally degradable wrapping materials in their packaging (Zhang and Zhao, 2012). Product without unnecessary waste from the effect of excessive packaging are one of the criteria for an environmentally friendly product (Elkington et al., 1990).

Some use the word excess packaging instead of overpackaging to describe packaging that supplies too much weight, is too heavy, too large, too costly, has too ornate decor, rhetoric that is too flattering and so on (Chen et al., 2017). In some cases, the word overpackaging is also used to describe a primary or a secondary packaging that is inappropriately large for product it contains but Elgaied-Gumbier (2014) clarifies that this specific type of excess packaging refers to oversized packaging rather than genuine overpackaging.

#### 2.2. Cognitive Appraisal Theory

Cognitive appraisal describe "a process through which the person evaluates whether a particular encounter with the environment is relevant to his or her wellbeing,

and if so, in what ways” (Folkman et al. 1986, p. 992). If the person evaluate the environmental situation to be stressful because the situation is irrelevant to their wellbeing, he or she generates potential coping strategies (both cognitive and behavioral activities) that help manage the situation (Lazarus, 1991; Lazarus and Folkman, 1984). In cognitive appraisal theory, both situation and personal factors interact to predict someone evaluation of their experiences (Lazarus and Folkman, 1984).

Lazarus and Folkman (1984) suggest two types of personal factors namely belief and commitment. Belief, including religious belief, is one of personal factors that influence appraisal by (1) determining what is salient for wellbeing in a given encounter; (2) shaping the person's understanding (cognitive appraisal process) of the event (environmental problem caused by overpackaging situation), and in consequence his or her emotions and coping efforts; and (3) providing the basis for evaluating outcomes (Lazarus and Folkman, 1984). Commitment express what is important to the person, what has meaning for him or her, and determine what is at stake in a specific stressful encounter (Lazarus and Folkman, 1984). In the overpackaging situation, any encounter that involves a strongly held commitment expressed by personal norms will be evaluated as meaningful to the extent that the outcome of overpackaged goods harms or threatens someone's commitment to protect the environment or facilitates its expression.

Cognitive appraisal theory posits that individuals experience discrete emotions based on their cognitive appraisal of specific events and it guides a more complete explanation about consumers' behavior (Lazarus, 1991). In other words, the manner in which customers evaluate the experience based on their situational and personal factors will generates certain emotional states. That is, when consumer perceive that

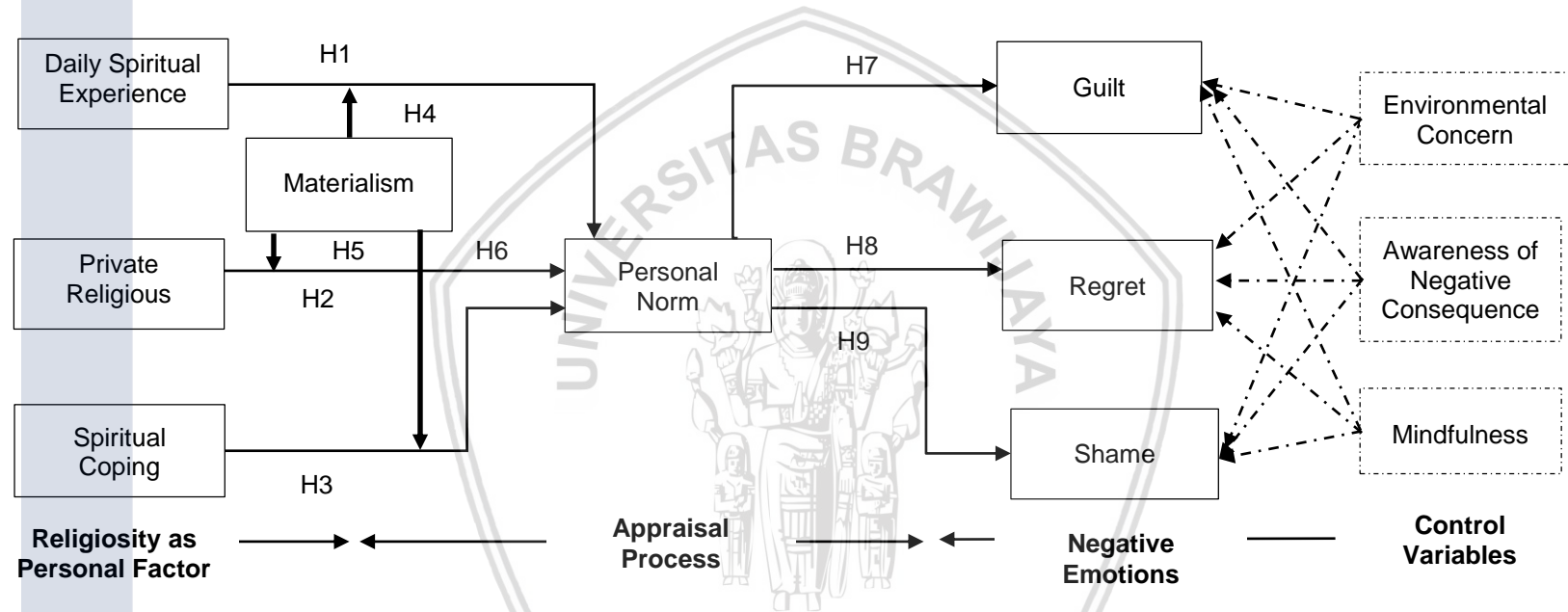
the waste problem caused by overpackaged good are bad, they are more likely to feel negative emotions.

The CAT theory is offered by Bagozzi et al. (1999) and Johnson and Stewart (2005) as a promising avenue for studying emotions in marketing contexts. This approach supposes that underlying evaluations of a situation (e.g. its desirability, certainty, etc.) combine to elicit specific emotions. Watson and Spence (2006) summarize that there are three issues addressed by cognitive appraisal theories: (1) to elucidate what are the underlying characteristics inherent in events that are evaluated or appraised; (2) what, if any, emotions are experienced as a result of this appraisal process; and (3) what are the behavioral responses to the experienced emotions.

Using cognitive appraisal approach, we want to understand how religiosity as consumer's personal factors triggering personal norms in support of reducing overpackaging and elicit negative emotion as the results of consumer's evaluation in this situation. We propose the framework in Figure 1.



Figure 1 Research Framework



### 2.3. The Effect of Religiosity on Personal Norms

Religiosity describe the belief in God followed by a commitment to follow rules and principles believed set by God (McDaniel and Burnett, 1990). In this study, we focused on three dimensions of religiosity that we choose from 12 “key domains” of religiousness and spirituality: daily spiritual experience, private religious practice, and religion/spiritual coping (John E. Fetzer Institute, 1999). It is still uncommon to find studies that examine multiple dimensions of religiosity with the goal of investigating their different effects. Looking at a single dimension or combine multiple dimensions into a single “religiousness” construct makes it difficult to compare the functions and associations of individual religious belief dimensions across studies. Examining a given process or mechanism for multiple religious belief constructs within a single study makes it possible to compare the religious belief constructs more easily and gives better understanding about how religious belief operate as separate and multidimensional constructs. These three dimensions of religiosity have been researched and show their influence in affecting subjective well-being (Jackson and Bergeman, 2011).and In that study, daily spiritual experience, religious practice, and religion/spiritual coping showed high correlation with life satisfaction. In the context of this research, having high life satisfaction means lower negative emotion.

Daily spiritual experience is the most significant recent innovations in the conceptualization and measurement of religiousness and spirituality that measures an aspect of spirituality and religiosity that has not been measured by earlier scales (Underwood, 2006). It asks about how often a person feel connected with a larger world outside of themselves, which could either be expressed by the term “God” or as a non-personal spiritual transcendence. The second dimensions of religiosity are private religious practices that represent a subset of behaviors constituting the larger

construct of religious involvement. The domain of private religious practices is distinct from the domain of public (ie, organizational, formal, institutional) religious behavior. Private practices are nonorganizational in that they occur outside the context of organized religion and informal in that they may not always occur at fixed times or in fixed places, or necessarily involve fixed liturgical formulae (John E. Fetzer Institute, 1999). The last dimensions of religiosity are religious/spiritual coping that measures how often individuals use religiosity and spirituality as a means of support (Garfield et al. 2001). Pargament (1997) defined religious–spiritual coping as a “process that people engage in to attain significance in stressful circumstances.” According to him, religious–spiritual coping is more likely to occur as the seriousness of the consequences of a situation increases (Pargament, 1997).

Personal norms refers to the personal value system responsible for acting morally. Schwartz (1977) defines a personal norm as self-expectation of specific action in a particular situation, experienced as a feeling of moral obligation. Personal norm is consistent with internalized values and norms, or in terms of moral theory, conceptions of right and wrong, good and bad (e.g., Gibbs, 2003). According to this definition personal norms are complied with for internal reasons, it provide the reason that personal norms are personal factors.

All the three dimensions of religiosity, daily spiritual experience, private religious practice, and religious/spiritual coping may affect consumer activate their personal norms in anti-overpackaged goods.

Daily spiritual experience capture feelings of direct interaction with the transcendent rather than simply a cognitive understanding (Idler et al., 2003). Daily spiritual experience gives people a feeling of connection with God, nature, and all humankind, which may cause people to draw the boundaries of their moral community

more extensively (Einolf, 2013XXX). In other word, people with higher daily spiritual experience will have higher feeling of obligation about what should they do to protect their environment from the harmful effect of overpackaged products that showed by higher personal norms. Based on that logic, we propose the hypothesis below:

**H1. The higher the consumer daily spiritual experience is, the higher the personal norm of anti-overpackaged goods will be.**

The frequency of private religious practices may indicate piety or devoutness or the penetration of religious rituals or messages into everyday life (Idler et al., 2003). The feelings of connectedness that go with private religious practice that performed by individual everyday may contribute to their sense of empathic concern for others' well-being (Einlof, 2013). In other words, in the context of overpackaging situation, someone with higher private religious practice have higher concern about other well-being that resulted in higher feeling to obligated to protect the environment from waste problems caused by overpackaged products. Based on that logic, we propose:

**H2. The higher the consumer private religious practice is, the higher the personal norm of anti- overpackaged goods will be.**

Religious/spiritual coping that someone feel will affect how they evaluate stressful situation and how they cope with that problem (Einolf, 2013). With religious/spiritual coping, people in stressful situation will seeking comfort and understanding in religion (Idler et al., 2003). In the context of this research, people with higher religious/spiritual coping will have higher religion understanding about waste problem caused by overpackaged goods that are stressful for them because the harmful effect for the environment sustainability. People with higher understanding will have higher feeling to protect the environment and reduce overpackaged goods that showed by higher personal norms. Based on that logic we propose:



**H3. The higher the consumer religion/spiritual coping is, the higher the personal norm of anti-overpackaged will be**

#### **2.4. Materialism**

Materialism may moderate the relationship between religiosity (daily spiritual experience, private religious practice, and religious/spiritual coping). Materialism is a value structure through which individuals seek more than instrumental value from the goods they acquire. They seek relationships with the objects of consumption that form their identity and enhance their subjective well-being. Thus, materialism is a multi-faceted construct relating individuals to the goods they possess (Killbourne and Pickett, 2007). Purchasing non-overpackaged product can be considered as pro-environmental behavior and ethical consumption (Elgaaied-Gambier, 2016). Materialism may affect the way customers perform personal norms in reduce overpackaging. The extent literature suggests that consumers' ethical beliefs can be differed based on individual characteristics (such as age and gender), religiosity, and materialism (Bateman and Valentine, 2010; Muncy and Eastman, 1998; Vitell, et al. 1991; Vitell and Paolillo, 2003). Previous study also suggested that materialism is negatively correlated not only with consumer ethics (Martin, 2003), but also with consumer's environment belief (Killbourne and Pickett, 2008). Personal norms are the primary influence on environmentally friendly behavior (Hopper and Nielsen 1991; Schwartz, 1977). People with higher environment belief will perform better personal norms, therefore we propose these hypotheses:

**H4. Materialism negatively moderates the relationship between consumer daily spiritual experience and the personal norm of anti-overpackaged goods.**

**H5. Materialism negatively moderates the relationship between consumer private religious practice and the personal norm of anti-overpackaged goods.**

**H6. Materialism moderates the relationship between consumer religion/spiritual coping and the personal norm of anti-overpackaged goods.**

## **2.5. The Effects of Personal Norms on Negative Emotions**

Consumer behavior research also indicates that negative emotions can result from events that are relevant to but incongruent with consumption goals (Menon and Dube, 2007; Lerner and Keltner, 2000). Regret, guilt and shame due to overpackaged products purchase decision would be an example of such an incongruent occurrence. In this research, we only focus on three kinds of negative emotion as the outcome of consumer's evaluation in purchasing overpackaged product situation.

Guilt is a negative emotion experienced when an individual feel responsible for a negative outcome (Baumeister, Stillwell, and Heatherton, 1995; Tangney and Dearing, 2002). Guilt is the outcome of cognitive appraisals (Bagozzi, Gopinath, and Nyer, 1999; Lazarus, 1991; Roseman, Spindel, and Jose, 1990; Tracy and Robins, 2004). Soscia (2007) demonstrates that guilt is experienced when goal incongruent outcomes are perceived as a direct consequence of personal action. This view is consistent with previous findings within appraisal theory (Folkes, Koletsky, and Graham, 1987; Roseman, 1991; Roseman, Antoniou, and Jose, 1996). Research demonstrates the positive influence of guilt in reducing consumption of unhealthy food (Mishra and Mishra, 2011; Mohr, Lichtenstein, and Janiszewski, 2012), antidrinking campaigns (Agrawal and Duhachek, 2010; Duhachek, Agrawal, and Han, 2012) and

promoting charitable donations (Basil, Ridgway, and Basil, 2006, 2008; Hibbert, Smith, Davies, and Ireland, 2007). The evidence from extant literature emphasize that personal norms will trigger the experiences of guilt (Antonetti and Maklan, 2014), when consumers choose overpackaged products because this action against their feeling of moral obligation to behave environment friendly. Therefore, we propose this hypothesis:

**H7. The higher the personal norm of anti-overpackaged, the higher the perceived guilt regarding the consumption of overpackaged goods will be.**

Regret happened when consumers reflect on and evaluate the decisions they have encountered, comparisons are made between the experienced outcomes and the outcomes that would have occurred under a different choice. In the overpackaging context, they may ask themselves questions such as: "Should I have purchased the non-overpackaged product rather than the overpackaged one?". These types of comparisons are quite common in contemporary society where consumers have a seemingly limitless set of options before making a selection (Simpson et al., 2008; Shankar et al., 2006). Regret may even manifest itself in situations when consumers are satisfied with their present selections. When comparing two alternatives and their respective outcomes, the satisfaction felt with a current selection is not necessarily important; instead, the determinant factor is whether the chosen alternative leads to a better or worse outcome than other available options. However, decisions can become unpleasant when consumers feel they have made an incorrect choice (Landman, 1987). Whenever a consumer perceives that a foregone alternative would have yielded a better outcome, a feeling of regret is experienced (Boles and Messick, 1995; Landman, 1987). Even if a consumer determines that his decision was the best

alternative at the point in time a choice was made, regret can still be experienced when the consumer believes another option would have yielded better results (Loomes and Sugden, 1982).

Richard et al. (1996) have shown that regret is an important predictor of socially unacceptable behavioral expectations (in the context of sexual and contraceptive behavior). The extant literature has been showed the relationship between personal norms and regret (Davies et al., 2002). Purchasing overpackaged products is not friendly for the environment, its somehow socially unacceptable behavior and likely to provoke negative feelings of regret when consumers not activate their personal norms. Therefore, appropriate to include that personal norms will trigger the feeling of regret when customer purchase overpackaged products. So, we propose this hypothesis:

**H8. The higher the personal norm of anti-overpackaged is, the higher the perceived regret regarding the consumption of overpackaged goods will be.**

Shame is a dejection-based emotion of condemning one's entire self (Ferguson and Stegge, 1998; Gramzow and Tangney, 1992; Leary, 2007; Tangney et al., 1996). Specific discrete emotions are aroused through cognitive appraisals, and goal and norm congruence (including personal norms) lead to different specific emotions such as shame (Ortony et al., 1988; Scherer, 1988). People feel ashamed when they feel they are bad people (Leary, 2007). When consumer purchase overpackaged products that contrary to their personal norms, they may feel shame because they feel that they are bad people. Sensitivity to shame is learned early in life and internalized such that violating norms (including personal norms) can arouse feelings of shame. These norms will form the benchmark for acceptable behavior while society creates expectations for real or perceived behavior, undoubtedly how we each internalize



these unwritten rules along with our traits, motivations, self-judgments, and contextual factors influence the degree of shame someone might experience (Scheff, 2003).

Therefore, we propose this hypothesis:

**H9. The higher the personal norm of anti-overpackaged goods, the higher the perceived shame regarding the consumption of overpackaged goods will be.**



## CHAPTER 3

### METHODOLOGY

This research is survey research because the purposes are to identify characteristic of the sample, to examine attitudes, and to analyze behavioral pattern. Survey requires asking some questions or statements based on the questionnaire to the people, who are called respondents (Zikmund, 2003). The formal term of survey research is to acquire representative sample of the target population by contacting respondents.

#### 3.1. Sample and Data Collection

The data was collected during June 2017, the respondents of the study is Taipei residents. The respondents were personally approached in front of a supermarkets. Taipei was chosen since Taipei government is always working hard to build sustainable urban living, so, we assume that Taipei residents have more awareness about sustainable living and overpackaging (Taipei, Designing The Future of Urban Living (futurecities.skift.com, September 23<sup>rd</sup>, 2015. Accessed on July 4<sup>th</sup>, 2017).

Based on the statistical data of Taipei government, total Taipei residents in 2015 are 2,704,810 with the significant difference between male and female. Total male population are 1,295,462 while female 1,409,348. There are also significant different in age composition where the younger population (0-14 years old) are 377,428, the working adult population (15-64 years) are 1,928,200, and elderly population (above 65 years old) are 399,182 (Taipei Demographic Overview, October 19<sup>th</sup>, 2016. Accessed on July 4<sup>th</sup>, 2017). Based on that condition, quota sampling is used.

Thirty-two cells were made based on gender (male and female), age (18-29, 30-

39, 40-49, 50 and above), and education (junior high and below, senior high, college/university, postgraduate and above). Respondents were directly approached in three supermarkets in three different districts in Taipei with different characteristics of consumers. Furthermore, 230 questionnaires were obtained.

### 3.2. Research Instrument

Before the respondents fill the questionnaire, we need to make sure that respondents have the idea about overpackaging and the harmful effect for environment. They were given the definition of overpackaging and pictures of bananas with many kinds of packaging, start from no packaging until the overpackaged one, to make sure that they can notice the overpackaging. It was verified using an open question "Do you notice which one is overpackaged?". We choose the pictures of banana because Taiwanese is very familiar with banana, since Taiwan produce more than 400,000 tons of Cavendish Banana per year (The Council of Agriculture. <http://eng.coa.gov.tw/ws.php?id=9439>. Accessed on July 4<sup>th</sup>, 2017) and 70% is consumed locally (<http://www.promusa.org/Taiwan>). After respondents notice the overpackaging then we show them a picture of mountains of rubbish as the harmful effect of overpackaging for our earth. Then, they were given the questionnaire about our study.

The questionnaire for the study consisted of eleven sections with ten measuring different constructs and the last, demographics. Ten scales used in the present study. All the items in the first three scales were Likert type with 1 indicating strongly disagree and 7 indicating strongly agree.

### 3.3. Measurement

All religiosity constructs measures come from the Brief Multidimensional Measure of Religiousness and Spirituality (BMMRS; John E. Fetzer Institute, 1999). The BMMRS was altered to enhance the ease of administration. Six items covering daily spiritual experiences items such as “I feel God's presence” and “I find strength and comfort in my religion”, originally included 6-points respond formats (many times a day to never or almost never). Five items covering private religious practices assessing the frequency of various activities, such as private prayer and Bible reading, originally included 5-point and 8-point response formats (never to more than once a day). Seven items covering religious/spiritual coping such as “I look to God for strength, support, and guidance” and “I wonder whether God has abandoned me”, originally included 4-point response format (a great deal, quite a bit, somewhat, and not at all to the more general always, often, seldom, and never). To be integrated with other constructs measures, we change the respond format to Likert type with 7-point response format like the other construct in the larger questionnaire.

The measurement for personal norm was taken from Onwezen et al., (2013). Four items used in this research is used too in their research in the context of pro-environmental behavior and adapted in our research to the context of overpackaging. The items include “I feel a moral obligation to choose non-overpackaged product.”

The “materialism” scale was taken from the Richins and Dawson (1992) materialism scale. Materialism researchers use this scale extensively, and social acceptability bias is low (Kilbourne and Pickett, 2008). While the original scale was composed of 18 items, the present study used only nine. They use the scale was used in their research related to environmental problem. The original scale provided a three-factor solution with success, happiness, and centrality as the three independent

dimensions of the construct. The item used include, "My life would be better if I owned certain things I don't have."

The measurement for "guilt" was taken from Antonetti and Maklan (2014) study which is developed from Soscia (2007) and Roseman (1991). Three items used in this research is used too in their research in the context of sustainability and adapted in our research to the context of overpackaging. The items include "I feel bad when I choose overpackaged product."

Three items measuring regret was taken from Bui, Krishen and Bates (2009). Items used in this research was adapted into the context of overpackaging. The items are "I feels sorry when I choose overpackaged product", "I feels regretful when I choose overpackaged product", and "I should have chosen non overpackages product."

"Shame" was measured by using three items from Ghorbani et al., (2013) study. Items used in this research was used in their research in the context of reparative behavior of wrong doing and adapted in our research to the context of overpackaging. The items include "I feel ashamed when I choose overpackaged product" and two other items.

### **3.4. Control Variables**

Given previous research has documented the relationship between environmental concern and awareness of negative consequences in affecting Guilt (Elgaaied, 2012), one of negative emotion construct in this research. Environmental concern is a term described the whole range of environmentally related perceptions, emotions, knowledge, attitudes, values and behaviors (Bamberg, 2003). While Stern et al. (1995) made an understanding that awareness of negative consequences is



awareness about the consequences of environmental conditions for self, for others, and for nonhuman species. Another construct relate to negative emotion is mindfulness. Mindfulness is a characteristic of mental states that emphasizes observing and attending to current experiences, including inner experiences, such as thoughts and emotions, with a nonjudgmental attitude and with acceptance (Hill and Updegraff, 2012). The Hill and Updegraff (2012) study showed that higher levels of mindfulness were related to higher levels of emotion differentiation for negative emotions. Based on previous research, environmental concern, awareness of negative consequences, and mindfulness is included as control variable in present study.

Environmental concern was measured with five items scale proposed by Bamberg (2003). Originally created by Preisendorfer (1996, in Bamberg, 2003) and translated from German by Bamberg. Moreover, it apprehends environmental concern as a one-dimension concept referring to a general attitude toward environmental issues, which was the conceptualization inferred from the qualitative study. The items include, "Thinking about the environmental conditions our children and grandchildren have to live under, worries me."

Awareness of negative consequences was measured with three items inspired by previous work by Stern et al. (1995) who apprehended the concept as the "consequences of environmental conditions for self, for others, and for nonhuman species". Items were adapted to our research topic and were used to measure the perceived harmful effects of the increase of waste volume due to overpackaging at three levels: the individual, the country, and vegetal and animal species. The items include "The increase of waste volume is a problem which is likely to have serious repercussions for me and my family."

Mindfulness measurement comes from The Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2006). FFMQ is a self-report measure assessing a general tendency to be mindful. This scale is composed of 39 items that are divided into five subscales or facets: nonreactivity, observing, acting with awareness, describing/ labeling, and nonjudging of experience. The present study used only five items which the factor loadings were highest for their factors in the Hill and Updegraff (2012) study. The includes items such as "I rush through activities without being really attentive to them."

### **3.5. Research Steps**

Data analysis was conducted by Partial Least Square (PLS) approach by employing WarpPLS software. PLS was selected because it is a powerful method for predicting (Henseller and Chin, 2010), in which all latent constructs, indirect effect and direct effect can be involved in the analysis. PLS statistical properties also provide very robust model estimations with data that have normal as well as extremely non-normal distribution (i.e., skewness and/or kurtosis) (Reinartz, Haenlin, and Henseler, 2009). Furthermore, PLS also capable in calculating the reliability and validity of the research instrument which is very important for model measurement.

#### **3.5.1. Analysis of Measurement Model (Outer Model)**

Researcher needs to assess the reliability and validity of the construct when testing any measurement model for our outer model. This process also known as instrument testing. Reliability refers to the extent to which a scale produces consistent results if repeated measurements are made, while validity refers to the extent to which differences in observed scale scores reflect true differences among objects on the characteristic being measured (Malholtra, 2007). Reliability was assessed with internal

consistency measure of Cronbach's alpha. Cronbach's alpha varies from 0 to 1, and a value of 0.6 or less generally indicates unsatisfactory internal consistency reliability (Malholtra, 2007). Lastly, validity was assessed by the result of convergent validity and discriminant validity.

### **3.5.2. Analysis of Structural Model (Inner Model)**

In addition to checking order to reflect how strong the other latent variables are connected, Hair et al. (2014) explained that there can be detailed looking at the determinant coefficient ( $R^2$ ) and the predictive relevance ( $Q^2$ ) which shows how much an exogenous latent variable contributes to an endogenous latent variable's. In a simple way, the purpose of this measurement is to see the effect size assesses the magnitude of strength of the relationship between the latent variables.

### **3.5.3. Hypothesis Testing**

Hypothesis testing was conducted for determining the relationship of the variables in this research. PLS testing can generate t-statistics for significance of the hypotheses of both inner and outer model, using a procedure called bootstrapping. Hypothesis is supported when  $p$ -value is less than 0.05.

## CHAPTER 4

### RESULTS

#### 4.1. Characteristic of Respondent

As shown at Table 1, using quota sampling, total sample of this study are 230 with 53.05% female and 46.95% male. The age of respondents ranged from 20 to over 50. The largest age group represented was above 50 (45.43%). The least represented group was 20-29 (14.33%). Nearly 43% of the respondents are graduated from college/university and around 10% are graduated from postgraduate institute and above. Most of the respondent income are higher than \$40,000.

**Table 1 Demographic Characteristics**

Demographic Variables		Percentage
<b>Gender</b>	Male	46.95 %
	Female	53.05%
<b>Age</b>	20-29	14.33 %
	30-39	21.04 %
	40-49	19.19 %
	above 50	45.43 %
<b>Education</b>	Junior high and below	19.72 %
	senior high	25.99 %
	college/university	43.71 %
	postgraduate and above	10.57 %
<b>Income</b>	20,000 and below	20.57 %
	20,001-30,000	23.71 %
	30,001-40,000	18.00 %
	40,001 and above	37.71 %

#### 4.2. Descriptive Statistics

Descriptive statistics were used to describe the overall sample composition, also to understand the sample background. Table 2 described the mean, and standard deviation of each variable. Given the 7-point Likert scale, awareness of negative consequences is the variable with highest mean and lowest standard deviation while private religious practice is variable with lowest mean and highest standard deviation.

**Table 2 Descriptive Statistics**

Name of Variable	Variable	N	Mean	Std. Deviation
Daily Spiritual Experience	Independent	230	4.19	1.74
Private Religious Practice	Independent	230	3.42	1.89
Religious/Spiritual Coping	Independent	230	3.62	1.84
Materialism	Moderator	230	3.71	1.71
Personal Norms	Mediator	230	5.62	1.43
Guilt	Dependent	230	4.46	1.48
Regret	Dependent	230	4.93	1.53
Shame	Dependent	230	4.11	1.58
Environmental Concern	Control	230	5.60	1.35
Awareness of Negative Consequences	Control	230	5.92	1.18
Mindfulness	Control	230	4.66	1.38

#### 4.3. Model Evaluation: Measurement Model Results

All the data analysis was assessed using WarpPLS 3.0. The result of the analyses indicated that the model fits the data quite well: Average path coefficient



(APC)=0.161,  $P<0.001$ ; average R-squared (ARS)=0.276,  $P<0.001$ ; average adjusted R-squared (AARS)=0.262,  $P<0.001$ ; average block VIF (AVIF)=2.623 (ideal); average full collinearity VIF (AFVIF)=4.122 (acceptable); tenenhaus GoF (GoF)=0.440 (large); sympson's paradox ratio (SPR)=0.833 (acceptable); R-squared contribution ratio (RSCR)=0.969 (acceptable); statistical suppression ratio (SSR)=1.000 (acceptable); nonlinear bivariate causality direction ratio (NLBCDR)=0.972 (acceptable).

#### **4.3.1. Measurement Model (Outer Model)**

Before analyzing the relationship among variables, we need to assess the reliability and validity of the construct when testing any measurement model for our outer model. Reliability was examined using Cronbach's alpha and composite reliability. Most scholars suggest that Cronbach alpha and composite reliability should be greater than 0.70. Table 3 shown that all variables indicate good reliability, except Mindfulness as one of our control variable.

Assessment of reflective measurement models also includes the convergent validity and discriminant validity. Convergent validity was measured with the average variance extracted (AVE) and loading factor. Good convergent validity indicated by AVE more than 0.5 and loading factor more than 0.7. Items with loading factor less than 0.7 are removed, Table 3 showed that all variables indicate a good convergent validity. Most of item deleted are from materialism, which only three items remained for the analysis. Three items to measure materialism construct showed good reliability and validity in previous research (Hultman, Kazeminia and Ghasemi, 2015; Riquelme and Roman, 2014; Walsh et al., 2016).

**Table 3 Inter-Construct Correlations (Reliability, Validity, and Correlation Matrix)**

Construct	Reliability		Convergent Validity		
	Cronbach Alpha	Composite Reliability	AVE	Loading Factor	
Daily Spiritual Experience	0.965	0.972	0.850	DSE 1	0.901
				DSE 2	0.940
				DSE 3	0.947
				DSE 4	0.936
				DSE 5	0.910
				DSE 6	0.898
Private Religious Practice	0.925	0.943	0.769	PRP 1	0.858
				PRP 2	0.907
				PRP 3	0.883
				PRP 4	0.882
				PRP 5	0.854
Religion/ Spiritual Coping	0.932	0.945	0.711	RSC 1	0.849
				RSC 2	0.883
				RSC 3	0.892
				RSC 4	0.764
				RSC 5	0.829
				RSC 6	0.816
				RSC 7	0.865
Materialism	0.776	0.870	0.691	MTR 1	Item deleted
				MTR 2	Item deleted
				MTR 3	Item deleted
				MTR 4	Item deleted
				MTR 5	0.785
				MTR 6	Item deleted
				MTR 7	0.842
				MTR 8	0.865
				MTR 9	Item deleted
Personal norms	0.886	0.921	0.746	PN 1	0.885
				PN 2	0.860
				PN 3	0.896
				PN 4	0.811
Guilt	0.916	0.947	0.857	GUI 1	0.890

Construct	Reliability		Convergent Validity		
	Cronbach Alpha	Composite Reliability	AVE	Loading Factor	
Regret	0.843	0.906	0.764	GUI 2	0.937
				GUI 3	0.948
				REG 1	0.909
Shame	0.919	0.949	0.862	REG 2	0.919
				REG 3	0.787
				SHA 1	0.931
Environmental Concern	0.830	0.881	0.597	SHA 2	0.951
				SHA 3	0.901
				EC 1	0.739
Awareness of Negative Consequences	0.891	0.933	0.822	EC 2	0.824
				EC 3	0.847
				EC 4	0.697
Mindfulness	0.531	0.762	0.517	EC 5	0.747
				AC 1	0.881
				AC 2	0.928
				AC 3	0.910
				MIND 1	Item deleted
Mindfulness	0.531	0.762	0.517	MIND 2	0.752
				MIND 3	Item deleted
				MIND 4	0.652
				MIND 5	0.749

The measurement of the discriminant validity is performed to show the extent to which a given construct differs from other constructs. Discriminant validity was measured by comparing the square root of the AVE with the correlations among constructs, where the diagonal elements should be greater than the correlation coefficients between the constructs and other constructs in the model (bolded number are higher than other number in the same column). Result in Table 4 showed good discriminant validity.

Table 4 Discriminant Validity

	Daily Spiritual Experience	Private Religious Practice	Religion/Spiritual Coping	Materialism	Personal norms	Guilt	Regret	Shame	Environmental Concern	Awareness of Negative Consequences	Mindfulness
Daily Spiritual Experience	<b>0.922</b>	0.818	0.833	0.089	0.250	0.331	0.242	0.292	0.191	0.206	0.201
Private Religious Practice	0.818	<b>0.877</b>	0.824	0.100	0.191	0.316	0.233	0.299	0.219	0.146	0.139
Religion/Spiritual Coping	0.833	0.824	<b>0.843</b>	0.147	0.253	0.350	0.278	0.328	0.244	0.209	0.214
Materialism	0.089	0.100	0.147	<b>0.831</b>	0.125	0.012	0.018	0.014	0.139	0.070	0.096
Personal norms	0.250	0.191	0.253	0.125	<b>0.864</b>	0.481	0.558	0.399	0.634	0.590	0.278
Guilt	0.331	0.316	0.350	-0.012	0.481	<b>0.926</b>	0.872	0.768	0.500	0.396	0.333
Regret	0.242	0.233	0.278	0.018	0.558	0.872	<b>0.874</b>	0.734	0.592	0.472	0.334
Shame	0.292	0.299	0.328	0.014	0.399	0.768	0.734	<b>0.928</b>	0.465	0.407	0.217
Environmental Concern	0.191	0.219	0.244	0.139	0.634	0.500	0.592	0.465	<b>0.807</b>	0.714	0.343
Awareness of Negative Consequences	0.206	0.144	0.209	0.070	0.590	0.396	0.472	0.407	0.714	<b>0.906</b>	0.326
Mindfulness	0.201	0.139	0.214	0.096	0.278	0.333	0.334	0.217	0.343	0.326	<b>0.719</b>

#### 4.3.2. Structural Model (Inner Model)

To evaluate the structural model, determinant coefficient ( $R^2$ ), predictive relevance ( $Q^2$ ) and the relative size of path coefficients were used. By interpreting these results, researcher can identify the key constructs with the highest relevance to explain the endogenous latent variables in the structural model. The structural model in this research was recursive model, means that only one direction of causality is allowed, and does not contain a direction of loop feedback on the construct (Chin, 2010). Table 5 presents the result of the  $R^2$  and  $Q^2$  of the construct.

**Table 5 Determinant Coefficient and Predictive Relevance**

Construct	Determinant coefficient ( $R^2$ )	Predictive Relevance ( $Q^2$ )
Personal norms	0.179	0.115
Guilt	0.274	0.325
Regret	0.409	0.432
Shame	0.244	0.251

Based on Hair et al. (2014), determinant coefficient ( $R^2$ ) value of 0.75, 0.50, and 0.25 is described as a rough rule of thumb for substantial, moderate, and weak, respectively. The  $R^2 = 0.179$  for personal norms indicates daily spiritual experience, private religious practice and religion/spiritual coping weakly explained the variance of personal norms substantiality. In terms of variable guilt,  $R^2 = 0.274$  shows that personal norms weakly explain guilt. For variable regret,  $R^2 = 0.409$  shows that personal norms moderately explain regret, and in terms of variable shame,  $R^2 = 0.244$  shows that personal norms weakly explain shame.



For the predictive relevance ( $Q^2$ ), Stone-Geisser's criteria is obtained if prediction of the data points is made by the underlying latent variable score. The aim for using cross-validated redundancy measure ( $Q^2$ ) was to examine the predictive relevance of one's theoretical structural model. Chin (1998) suggested  $Q^2$  greater than 0 implies that the model has predictive relevance, whereas  $Q^2$  less than 0 suggests the model lacks predictive relevance. As shown in Table 5, both  $Q^2$  value are greater than 0, indicating endogenous variable has predictive relevance.

#### 4.4. Hypotheses Testing

The next step after the measurement of the scale items, and get the result of the reliability each of need to test the relationship between the variable based on the propose hypotheses at scale item, advance, to knowing whether the hypothesis accepted. Table 6 shows that Hypothesis H1, H2, H3, H5, H7, H8, H9 are supported, but the results for hypotheses H4 and H6 are not supported.

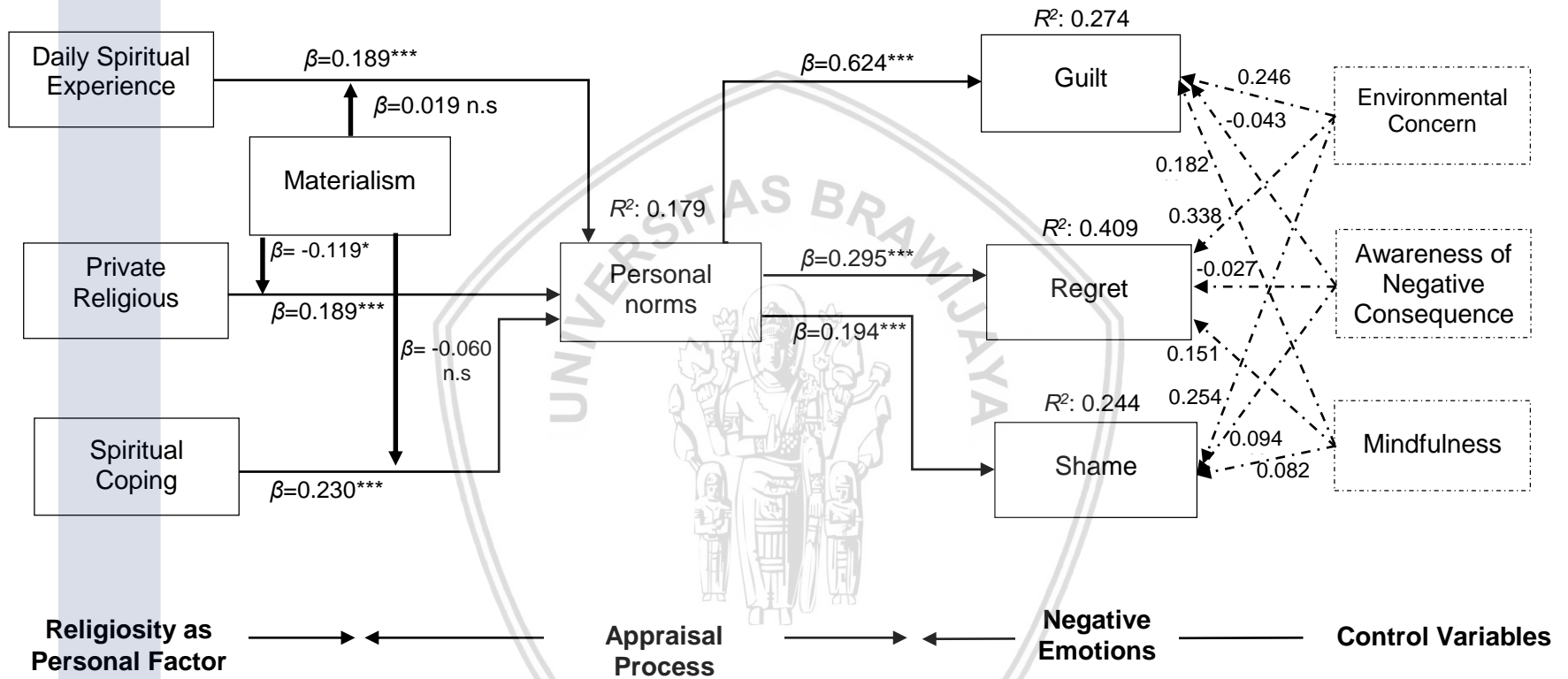
**Table 6 Hypothesis Summary**

Hypotheses	Path Coefficients ( $\beta$ )	P-value	Supported/ Not Supported
<b>Direct Effects</b>			
H1: Daily Spiritual Experience → Personal norms	0.189	<0.001	Supported
H2: Private Religious Practice → Personal norms	0.189	<0.001	Supported
H3: Religion/Spiritual Coping → Personal norms	0.230	<0.001	Supported
H7: Personal norms → Guilt	0.264	<0.001	Supported
H8: Personal norms → Regret	0.295	<0.001	Supported

Hypotheses	Path Coefficients ( $\beta$ )	P-value	Supported/ Not Supported
H9: Personal norms → Shame	0.194	<0.001	Supported
<b>Moderating Effects</b>			
H4: Daily Spiritual Experience → Materialism → Personal norms	0.019	0.366	Not Supported
H5: Private Religious Practice → Materialism → Personal norms	-0.119	0.016	Supported
H6: Religion/Spiritual Coping → Materialism → Personal norms	-0.060	0.139	Not Supported
<b>Control Variable</b>			
Environmental Concern → Guilt	0.246	0.008	-
Environmental Concern → Regret	0.338	<0.001	-
Environmental Concern → Shame	0.254	0.006	-
Awareness of Negative Consequences → Guilt	-0.043	0.376	-
Awareness of Negative Consequences → Regret	-0.027	0.407	-
Awareness of Negative Consequences → Shame	0.094	0.120	-
Mindfulness → Guilt	0.182	0.003	-
Mindfulness → Regret	0.151	0.008	-
Mindfulness → Shame	0.082	0.248	-

Path coefficient value ( $\beta$ ) for each hypothesis, p-value, and  $R^2$  are summarized in Figure 2 below:

Figure 2 Path Coefficient Result



Notes: \*\*\*,  $p < 0.001$ ; \*\*,  $p < 0.01$ ; \*,  $p < 0.05$ ; n.s.: not significant.

## CHAPTER 5

### DISCUSSION

#### 5.1. Summary of Research Findings

This study focus on overpackaging while prior study mainly devotes efforts in green packaging, environmental friendly packaging, and sustainable packaging (e.g., Magnier and Crie, 2015; Prakash and Pathak, 2017; Seo et al., 2016). This study propose “belief-norm-emotion” framework behavior, utilizing cognitive appraisal theory. This study expands our understanding of consumer behavior toward overpackaging by examining the influences of consumers personal factors on their negative emotion. Findings suggest that personal factors (religious belief and personal norms) play important roles in consumer negative emotions toward overpackaging.

Findings in this study indicates that the higher the consumer daily spiritual experience, private religious practice, and consumer religion/spiritual coping, the higher the personal norm of anti- overpackaged goods will be. These results are in line with value-belief- norm theory by Stern et al. (1999) which also consider religious belief have important influence on environmentalism that reflected by how someone perform personal “proenvironmental” norm because religious belief offer an absolute standard of interest, efficiency, and practicality. This research also find that the higher the consumer daily spiritual experience does not mean higher the personal norm of anti-overpackaged goods. The conclusion of this findings is the higher someone’s religiousness the higher someone possibility to follow their personal norms to reduce overpackaging. This finding emphasizes the importance of religiosity as personal factors that can guide someone to activate their personal norms in attempt to reduce overpackaging.

This result also shows that materialism negatively moderating the relationship between private religious practice and personal norms in reducing overpackaging. This moderating relationship conclude that materialism is in line with previous research done by Muncy and Eastman (1998). Their research gives empirical evidence that indicate the negative correlation between materialism and consumer's higher ethical standard. Another study also shows similar result with present study's findings, that materialism could link to certain types of unethical behavior and could become the focus of one's life, above religion, friends, and other achievements (Richins and Dawson, 1992).

This study also shows that materialism is not a significance moderator in influencing the relationship between daily spiritual experience, religious/spiritual coping and personal norm in reducing overpackaged product. This result can be interpreted through the classification of spiritual materialism especially in Buddhism provided by Gould (2006). Since majority of Taipei residents are Buddhist, reasoning from Gould (2006) can be used to explain in this research. He articulates the relationship between spirituality and materiality by devising four types of materialism: "(1) completely materialistically oriented without a spiritual connection, (2) asceticism, (3) spiritualized self-transformation, and (4) spiritualized self-liberation" (Gould 2006). The first type is pure materialism, and the other three types are forms of spirituality. The second type, asceticism, completely refuses materiality. Consumption is negated and is reduced to a minimum. The third type, spiritualized self-transformation, is the use of materiality and consumption as a part of self-improvement. Finally, spiritualized self-liberation refers to the path toward an awareness that the self is not real.

Findings also suggest that the higher the personal norm of anti-overpackaged, the higher the perceived negative emotion regarding the consumption of



overpackaged goods will be. The relationship between personal norm and guilt is in line with previous research by Antonetti and Maklan (2014). Their result show that the activation of personal norms can trigger the feeling of guilt experienced by consumers after a purchase decision that involves issues of environmental and social sustainability.

This research also find that consumers feel regret when they choose overpackaged product. Regret can elicit when consumers reflect on and evaluate the decisions they have encountered, comparisons are made between the experienced outcomes and the outcomes that would have occurred under a different choice (Bui et al., 2009). Considering the definition of regret to this research view of overpackaging, consumer can feel regret when they compare overpackaged product with non-overpackaged product.

Based on the result of this research, when consumer have their personal norms they will have more awareness in evaluate the decision to buy overpackaged product and they made a comparison with another condition when they choose non-overpackaged product that harmful for environment. Particularly the perceived shame regarding the consumption of overpackaged goods. This result in line with previous research by Hopper and Nielsen (1991) that shame is the result of a violation of a personal norm. Shame can also arise when someone judged as not meeting some ideal in society (Shweder 2003). In Taiwan, especially Taipei City, people have more awareness about overpackaging since the government also made a clear policy to restrict over packaging (Excessive Product Packaging Restriction, 2005). As the society in Taipei become more sustainable and aware about overpackaging, consumer will compare themselves with other individual in their society and they will feel shame if they not perform the same behavior as others.

In conclusion, consumer personal factors determine consumer negative emotion. Significant effects religious belief on personal norms, and personal norms on negative emotions in this study suggests that religious belief plays an important role in affecting consumer negative emotions. Furthermore, this study demonstrates the prominent role of materialism as a moderator in influencing the direct relationship between religious belief and personal norms.

### **5.2. Theoretical Implication**

The present study contributes on the application of cognitive appraisal theory with negative emotion as the outcome while previous studies in overpackaging or excessive packaging have been focused on behavioral outcome such as purchase intention (Elgaaied-Gambier, 2016; Monnot, Parguel, and Reniou, 2014). The result of this study shows that religious belief as consumers personal factor will activate personal norms in support of reducing overpackaging, also the role of materialism in moderating the relationship. This activation of personal norms will trigger the elicitation of consumers negative emotion when they choose overpackaged product. Between the three negative emotions, regret have the highest R<sup>2</sup> which means the activation of personal norms will trigger regret the most in the overpackaging context. This implies future research to investigate more about the role of these negative emotion in influencing consumer sustainable behavior especially in reducing overpackaging situation.

### **5.3. Managerial Implication**

Our research suggests a number of managerial implications. First of all, this research emphasizes the importance of reducing overpackaging. This research

encourages marketers to be more sustainable in their packaging since the customer will feel the negative emotions after purchasing overpackaged product. Marketers can use the negative emotion as an approach to attract consumer in purchasing non-overpackaged product. Koenig-Lewis et al. (2014) results have confirmed that negative emotions play an important role in predicting pro-environmental purchasing behavior in the context of ecologically responsible packaging. The emotional benefits related to the experience of well-being while using an environmentally friendly packaging can also be considered as a persuasive argument to attract consumer to choose non-overpackaged product (Magnier and Crié, 2015).

This study acknowledges the importance of religiosity as personal factor in influencing personal norm in support of reducing overpackaging. When it comes to environmental consumption, motivations can be either personal or altruistic/pro-social (Thøgersen, 2011; Van Doorn and Verhoef, 2011). This implies that different motivations include religious belief can be used to promote reduction of overpackaging. Messages in advertising and product packaging can communicate religiosity and personal norms, such marketing campaigns and product information might be effective in boosting consumer awareness and negative emotions, which in turn will encourage consumers with more interest in pro-environmental behaviors to choose non-overpackaged products.

#### **5.4. Limitations and Suggestion for Future Research**

Despite its contributions, this study is not free of limitations. This study is about the consumer's evaluation in overpackaging as an environmental problem. Specifically, how religiosity as personal factors influence consumer's evaluation. Another personal factor out of this research are commitments, experience, and

education (Lazarus and Folkman, 1984). It might be interesting for future research to see how other situational or personal factors, such as commitment, value, and goals related variables) influencing consumer's evaluation about overpackaged product to give better understanding about the antecedents of cognitive appraisal process.

There are not many research in the context of overpackaging or excessive packaging. Future research may contribute by explore more about possible green marketing strategy, particularly in overpackaging situation.



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## Appendix

### Measurement of the Variables

#### (Questionnaire)





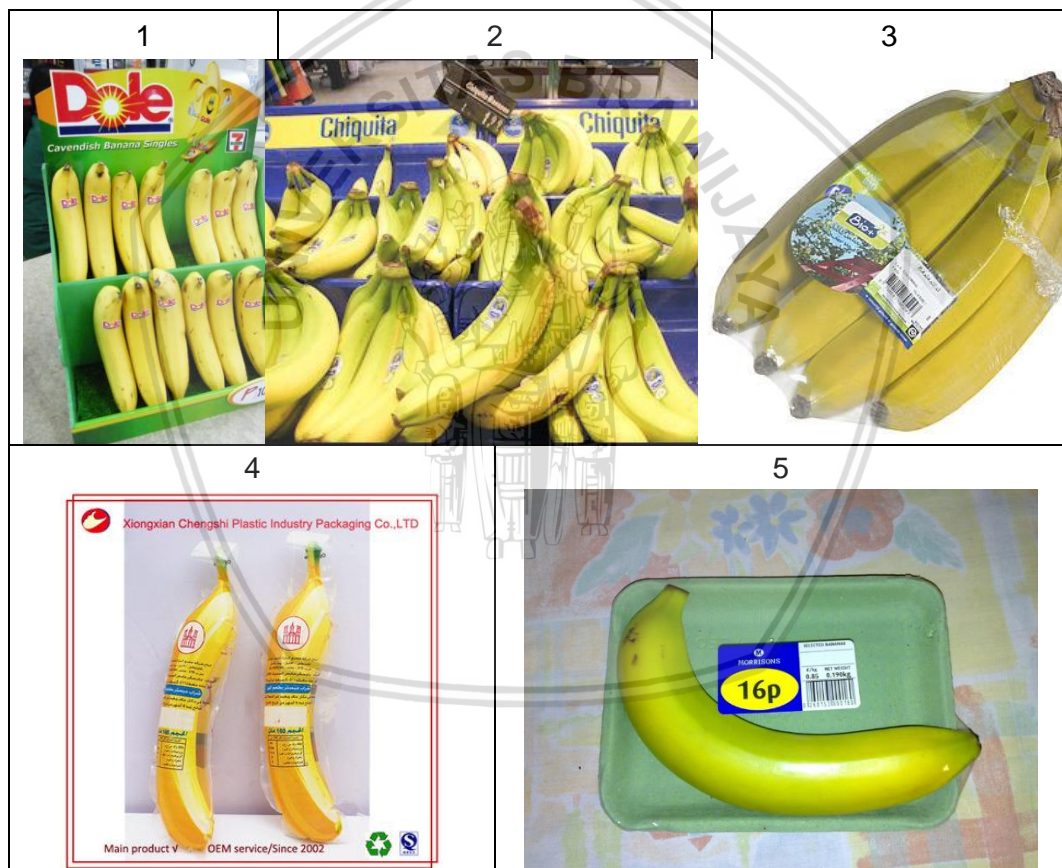
親愛的台北市民，您好：

本中心為國立中央大學企業管理學系行銷研究中心。本研究主要是探討「產品過度包裝」對人類生活環境的影響中，「個人信仰」所扮演的角色。本中心非常需要您的參與，懇請 您能撥出少許寶貴的時間填答。本問卷採用匿名方式，所收集的資料純粹作為學術統計分析，絕對不會洩漏 您任何的資料，因此，懇請 您安心填答。最後，再次感謝 您熱心的參與，並向 您致上萬分的謝意。

國立中央大學企管系

敬柯拉娜 研究助理  
鄭明松 教授

在您開始回答問題之前，我們簡單介紹一下何謂產品「過度包裝」。產品過度包裝指的是比起產品所需的包裝，使用了過多的包裝材料。請仔細觀察以下圖片



你認為，以上哪個是產品「過度包裝」？ 可不選，也可複選。	1	2	3	4	5
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請翻頁

「過度包裝」的產品對我們的環境有很大的傷害，如果人類不斷地購買「過度包裝」的產品，世界各地每天將會增加大量的垃圾，以下圖片顯示了過度包裝產品對環境的影響：





現在請您填寫本研究的正式問卷，非常感謝！！



第一部分: 請閱讀以下敘述，圈選您同意的程度，您的回答並沒有對錯，單純個人觀念而已

no	問題題項	不同意	←→	同意
1	我總能感受到神社或上帝的存在.....	1	2 3 4 5 6 7	
2	大多時候，我在宗教信仰中找到力量和安慰.....	1	2 3 4 5 6 7	
3	大多時候，我會感到內心深處的平靜與和諧.....	1	2 3 4 5 6 7	
4	大多時候，我渴望更接近神或上帝或是能與它們連結在一起...	1	2 3 4 5 6 7	
5	我總是能夠直接或透過他人感受到神社或上帝對我的愛.....	1	2 3 4 5 6 7	
6	我總是會被神社或上帝的所作所為所感動.....	1	2 3 4 5 6 7	
7	我經常在正式宗教機構（寺廟、神壇、教會等）以外的地方 ，私下敬神、膜拜、或禱告.....	1	2 3 4 5 6 7	
8	我經常沈思、冥想於我的宗教信仰中.....	1	2 3 4 5 6 7	
9	我經常在電視、收音機或網路上觀看或收聽宗教節目.....	1	2 3 4 5 6 7	
10	我經常閱讀宗教經文或其他宗教文學的文章.....	1	2 3 4 5 6 7	
11	我在家經常祈禱或感謝神社或上帝.....	1	2 3 4 5 6 7	
12	我時常思考如何將我的人生融入共多的宗教信仰.....	1	2 3 4 5 6 7	
13	神或上帝與我同在.....	1	2 3 4 5 6 7	
14	我向宗教尋求力量、支持和指導.....	1	2 3 4 5 6 7	
15	當我犯錯或缺乏靈性時，神社或上帝會懲罰我.....	1	2 3 4 5 6 7	
16	我確信神社或上帝永遠不會拋棄我.....	1	2 3 4 5 6 7	
17	不依賴神或上帝來理解事情做決定，將會是一件很嚴重的事...	1	2 3 4 5 6 7	
18	當遭遇壓力時，我總是依賴宗教來理解和處理事情.....	1	2 3 4 5 6 7	
19	我羨慕擁有豪宅、高檔車和名牌衣的人.....	1	2 3 4 5 6 7	
20	我擁有的東西會顯示我的人生過得多好.....	1	2 3 4 5 6 7	
21	我喜歡擁有讓人印象深刻、眼睛一亮的東西.....	1	2 3 4 5 6 7	
22	我試著讓我的生活簡單、樸素.....	1	2 3 4 5 6 7	
23	買東西會讓我感到愉悅.....	1	2 3 4 5 6 7	
24	我喜歡過著奢華的生活.....	1	2 3 4 5 6 7	
25	擁有那些我沒擁有的東西，我的生活會更美好.....	1	2 3 4 5 6 7	
26	如果可以買更多的東西，我會變得更快樂.....	1	2 3 4 5 6 7	
27	負擔不起我想買的東西令我很困擾.....	1	2 3 4 5 6 7	
28	選擇非過度包裝的產品是一種道德責任的展現.....	1	2 3 4 5 6 7	
29	我應該選擇非過度包裝的產品.....	1	2 3 4 5 6 7	
30	我認為人們選擇非過度包裝的產品是一件很重要的事.....	1	2 3 4 5 6 7	

非常感謝，請翻頁繼續!!

no	問題題項	不同意	←→	同意				
31	因自我價值觀與原則，我認為有義務選用非過度包裝的產品...	1	2	3	4	5	6	7
32	想到未來我們下一代的生活環境，我就很煩惱.....	1	2	3	4	5	6	7
33	當看到報紙或電視上有關環境問題的報導，我就感到憤怒.....	1	2	3	4	5	6	7
34	如果持續像以前一樣，我們將會面臨一場環境的災難.....	1	2	3	4	5	6	7
35	不可否認的是，政治家對環境保護工作付出太少的心力.....	1	2	3	4	5	6	7
36	為了環保，我們應該準備好約束我們的生活方式.....	1	2	3	4	5	6	7
37	廢棄物的增加會對我和家人產生嚴重不良的影響.....	1	2	3	4	5	6	7
38	廢棄物的增加會對國家發展產生嚴重的不良影響.....	1	2	3	4	5	6	7
39	廢棄物的增加嚴重的影響了動植物物種的發展.....	1	2	3	4	5	6	7
40	我不喜形於色.....	1	2	3	4	5	6	7
41	走路時，我會謹慎地注意我身體移動的那種感覺.....	1	2	3	4	5	6	7
42	我會倉促行事.....	1	2	3	4	5	6	7
43	我善於描述我的感受.....	1	2	3	4	5	6	7
44	當我覺得想法有不合理時，我就會否決這個想法.....	1	2	3	4	5	6	7
45	如果我選用過度包裝的產品時，我會感到很抱歉.....	1	2	3	4	5	6	7
46	如果我選用過度包裝的產品，我會感到蠻懊惱的.....	1	2	3	4	5	6	7
47	我應該選用沒有過度包裝的產品.....	1	2	3	4	5	6	7
48	當選擇過度包裝的產品時，我會感到很懊惱.....	1	2	3	4	5	6	7
49	當選擇過度包裝的產品時，我的感覺會很差.....	1	2	3	4	5	6	7
50	當選擇過度包裝的產品時，我會感到有罪惡感.....	1	2	3	4	5	6	7
51	當選擇過度包裝的產品時，我會感到羞恥感.....	1	2	3	4	5	6	7
52	當選擇過度包裝的產品時，我會感到很尷尬.....	1	2	3	4	5	6	7
53	當選擇過度包裝產品時，我會覺得我的行為就像個傻瓜一樣...	1	2	3	4	5	6	7

**第二部分: 請回答(勾選)以下個人問題, 本中心會保密這些回答, 不會洩漏這些訊息**

- 1.性別 ☐ 男性 ☐ 女性
- 2.年齡 ☐ 18-29 歲 ☐ 30-39 歲 ☐ 40-49 歲 ☐ 50 歲以上
- 3.教育程度 ☐ 國中(含)以下 ☐ 高中 ☐ 大專 ☐ 研究生(含)以上
- 4.月收入 ☐ 20,000 (含) 以下 ☐ 20,001-30,000  
(個人) ☐ 30,001-40,000 ☐ 40001 (含) 以上

謝謝您耐心作答，請您再檢查一下是否有漏答的題目。最後，再次感謝。



## TRANSLATED QUESTIONNAIRE

Dear Taipei citizen,

We are from National Central University Department of Business Administration Marketing Research Center. This study focuses on the role of "personal belief" in the impact of "overpackaging" on the human environment. We really need your participation, and we hope you can spare a little of your valuable time. The questionnaire will be anonymous and the information collected is purely for academic statistic purpose and we will never leak any of your information. Finally, thank you again for your participation.

Sincerely,

Kelana Research Assistant & Professor Cheng Mingsung  
National Central University

Before you start answer the questions, let's take a brief look at what the product is "overpacking". Excessive packaging refers to the packaging required for the product, using too much packaging material. Please observe the following pictures carefully.





Which one do you think is overpackaged?	1	2	3	4	5
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Overpackaged products are harmful for our environment. If people are constantly buying overpackaged products, tons of garbage will increase every day around the world. The pictures below show the effect of overpackaged product for our environment:



No	Statement	strongly disagree			↔	strongly agree		
1	I always feel God's presence.	1	2	3	4	5	6	7
2	Most time a day, I find strength and comfort in my religion.	1	2	3	4	5	6	7
3	Most time a day, I feel deep inner peace or harmony.	1	2	3	4	5	6	7
4	Most time a day, I desire to be closer to or in union with God.	1	2	3	4	5	6	7
5	I feel God's love for me, directly or through others most of the time in a day.	1	2	3	4	5	6	7
6	I am spiritually touched by what God have done in most of the time in a day.	1	2	3	4	5	6	7
7	I often pray privately in places other than place of worship.	1	2	3	4	5	6	7
8	I often meditate within my religious.	1	2	3	4	5	6	7
9	I often watch or listen to religious programs on TV, radio or Internet.	1	2	3	4	5	6	7
10	I often read the religious scriptures or other religious literature.	1	2	3	4	5	6	7
11	I often said pray or grace before or after meals in my home.	1	2	3	4	5	6	7
12	I always think about how my life is part of a larger spiritual force.	1	2	3	4	5	6	7
13	I don't think I work with God as partners.	1	2	3	4	5	6	7
14	I look to my religion for strength, support, and guidance.	1	2	3	4	5	6	7
15	I really feel God is punishing me when I sins or lack of spirituality.	1	2	3	4	5	6	7
16	I'm certain that God never abandoned me.	1	2	3	4	5	6	7
17	It's a great deal to me to make sense of the situation and decide what to do without relying on God.	1	2	3	4	5	6	7
18	In a stressful condition, I always relying to my religion to understand and dealing with it.	1	2	3	4	5	6	7
19	I admire people who own expensive homes, cars, and clothes.	1	2	3	4	5	6	7
20	The things I own say a lot about how well I am doing in life.	1	2	3	4	5	6	7
21	I like to own things that impress people.	1	2	3	4	5	6	7
22	I try to keep my life simple, as far as	1	2	3	4	5	6	7



	possessions are concerned.							
23	Buying things gives me a lot of pleasure.	1	2	3	4	5	6	7
24	I like a lot of luxury in my life.	1	2	3	4	5	6	7
25	My life would be better if I owned certain things I do not have.	1	2	3	4	5	6	7
26	I would be happier if I could afford to buy more things.	1	2	3	4	5	6	7
27	It sometimes bothers me quite a bit that I cannot afford to buy all the things I would like	1	2	3	4	5	6	7
28	It is a moral obligation to choose non-overpackaged product.	1	2	3	4	5	6	7
29	I should choose non-overpackaged product.	1	2	3	4	5	6	7
30	I feel it is important that people in general choose non-overpackaged product.	1	2	3	4	5	6	7
31	Because of my own values and principles, I feel an obligation to choose non-overpackaged product.	1	2	3	4	5	6	7
32	Thinking about the environmental conditions our children and grandchildren have to live under, worries me.	1	2	3	4	5	6	7
33	When I read newspaper articles about environmental problems or view such TV-reports, I am indignant and angry.	1	2	3	4	5	6	7
34	If we continue as before, we are approaching an environmental catastrophe.	1	2	3	4	5	6	7
35	It is still true that politicians do far too little for environmental protection.	1	2	3	4	5	6	7
36	For the benefit of the environment we should be prepared to restrict our momentary style of living.	1	2	3	4	5	6	7
37	The increase of waste volume is a problem which is likely to have serious repercussions for me and my family.	1	2	3	4	5	6	7
38	The increase of waste volume is a problem which is likely to have serious repercussions at the country level.	1	2	3	4	5	6	7
39	The increase of waste volume is a problem likely to have serious repercussions for animal and vegetal species.	1	2	3	4	5	6	7
40	I perceive my feelings and emotions without having to react to them.	1	2	3	4	5	6	7
41	I will pay attention to the feeling of my	1	2	3	4	5	6	7

